THE AMERICAN BEE JOURNAL
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THOMAS G. NEWMAN,
EDITOR.

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EDITORIAL BUZZINGS.

You Never Hear the bee complain,
Nor hear it weep nor wail;
But, if it wish, it can unfold
A very painful tail.

The Honey Crop of California is now reported to be only two-thirds of an average product. Our first reports said that it was large, but gave no comparison.

Mr. Joseph McCaul (late of McCaul & Hildreth Brothers), has again opened the "Bee-Keepers' Headquarters" at 191 Duane Street (near Greenwich), New York, and invites all apiarists who go to New York, to give him a call.

Mr. G. M. Doolittle, we regret to learn, has been confined to his residence for a week or more, with lumbago, or "crick in the back." The only easy position he has found so far, is being propped back in a rocking chair. This must be "misery" for our energetic friend. We hope that complete relief will soon be found, and that "Richard will be himself again," before many days pass.

New Bee Book.—We have received from the publisher, L. Upcott Gill, 170 Strand, W.C., London, England, a copy of "The Book of Bee-Keeping," by W. B. Webster. It is a pamphlet of 98 pages, and covers the whole ground of the modern "management of bees," Mr. Webster being a first-class expert of the British Bee-Keepers' Association. It is gotten up cheaply to fill the popular demand of English cottagers for a cheap manual of bee-keeping, and sells for a shilling. It gives, in a concise form, what to do in the apiary, and how to do it, but the methods and implements are not such as are used in America, except in a few particulars.

Major Von Hruschka, the inventor of the honey extractor, is dead. He died in Venice on May 11, 1888. This we gleam from the *L'Apicoltore* for June, which is just received. Major Hruschka was a retired Austrian officer, and the invention of the honey extractor occurred in this way: His apiary was in Italy, and one day when the Major, who was a most observing and critical bee-keeper, was in his apiary, his little boy came there to him. The boy had a small tin pail tied to a string, which he was swinging, boy-like, around and around in a circle, holding the end of the string in his hand.

The indulgent father gave the youth a small piece of comb filled with honey, putting it into the little pail. The boy, after awhile, began to swing the pail again as before, with the honey in it. A few moments after, he became tired of that amusement, and put the pail down to talk to his father, who took it up, and, by chance, noticed that the honey had left the comb and settled down into the pail, leaving the comb perfectly clean that had been on the outside of the circle when the boy was swinging it around. The Major wondered at the circumstance, and, turning the comb over, bade the boy swing it again, when, to his great astonishment, the other side of the comb also became perfectly clean, all the honey being extracted and lying at the bottom of the pail.

During the following night Major Von Hruschka, after going to bed, commenced to think the circumstance over; he thought, and thought, and his thoughts troubled him so much that on the morrow he commenced a series of experiments which resulted in his giving to the world the first honey extractor, which, by whirling, something like his son whirled that little tin pail, gave him the pure liquid honey, extracted by centrifugal force, leaving the honey-comb entirely free from the liquid sweet, which he gave again to the bees to fill; allowing him the pure honey for making wine, mead and metheglin, or honey cakes, as desired, without employing the troublesome and primitive method in use up to that time, of mashing up the combs containing the honey, pollen, and sometimes brood, too, to let the honey drain through the cloth in which it was placed—giving what was formerly known as "strained honey."

Chapman Honey-Plant and White Clover.—S. Burton, Eureka, Ills., on June 15, 1888, writes:

The Chapman honey-plant seed that I obtained in the spring of 1887, is doing finely now. It is from 4 to 6 feet high, and is heading for bloom. Will it bloom more than once from the old root? All who see the plant want to know what I am "raising those thistles for." I will write more about it later. I have had 10 swarms this spring, but none the past week. The white clover will be scarce until the new crop comes from the seed, which is abundant, and which, I think, will bloom in July.

It is a perennial, and blooms yearly from the same root until killed.

Squeezing Blood from a Turnip.—Those fellows who wager a thousand dollars without knowing what they are talking about, as Mr. Evans did (see page 388), are usually the kind of persons, financially, who "have nothing to lose."

Mr. H. M. Moyer, of Hill Church, Pa., writes thus on June 18, 1888, to the Manager of the National Bee-Keepers' Union:

I have read that article of yours on "the Wiley lie," on page 388. It is entirely too much to stand that wager of Mr. Evans. I will give three dollars if you will compel him to pay that thousand dollars into the treasury of the Bee-Keepers' Union. He is beaten, and should now pay it, just as Mr. Root would have had to pay if beaten.

Yes; he ought to pay the money, but had he been worth it, that wager would never have been made. Men who know the value of money do not make such wagers, unless they are drunk or crazy. Mr. Evans was, no doubt, sober, but luny on morality and honesty—a pessimist!

You may as well try to squeeze blood from a turnip as to get money from such an idle boaster as the man who wrote on page 388 that characteristic letter which calls sacramental wine "the essence of hell." He is evidently a worthless "crank."

Comb Surface.—In last week's issue, on page 407, Mr. Weidman makes some calculations on the number of cells in a frame 10¾x10¾ inches. As he comes to conclusions very different from those universally received, we fully intended to have added a foot-note to the article, calling attention to an evident error he had fallen into. But on account of sickness and consequent absence of our principal assistant, giving us extra cares, it was omitted. We will now give it attention here.

Mr. Weidman, in trying to correct Messrs. Doolittle and McNeill, makes a sad blunder himself. In one inch of comb there are about 27 cells—each cell averaging a trifle less than one-fifth of an inch—or 54 on both surfaces of one inch of comb. By an error Mr. W. has doubled this again, and so all his calculations are doubled!

Silver Lining to the Clouds.—Wm. Malone, of Newbern, Iowa, writes thus about the present discouraging season:

Have you seen the silver lining to the clouds so much talked of in 1882? I have not, but expect to do so very soon. Bees are swarming, but are not gathering any honey yet. The lindens will bloom in about ten days—then you will hear from Iowa. I am not discouraged, for I have not forgotten the season of 1882. We shall have a big honey flow soon, and "Don't you forget it!"

It will be welcomed by every apiarist. It now looks as though linden and a fall crop were our only hope for honey this year.

Mons. Alexander Jules, founder of the Society of Apiculture of Eure and Loir, died in the 58th year of his age, on April 25, 1888. He was an advanced apiarist, and a genial gentleman.

GLEANS OF NEWS.

Swarm Catchers.—*Gleanings*, for June 15, is on hand, and, as usual, is full of very interesting matter. An article on swarming, and its attendant clustering, is timely and instructive. We will condense it for our readers:

The swarm basket of Dr. S. W. Morrison, of Oxford, Pa., is thus described:

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The two poles are then placed upright, wit the grooved sides together, the end of one pole being at about the middle of the other pole, and both are fastened together with an iron band near the connecting end of each pole. A pully is then put at the upper end of the lower pole, and a rope fastened at the lower end of the upper pole, running up through the groove and over the pully, is used to raise or lower the upper pole. At the upper end of the upper pole a peach-basket is fastened by means of ring staples to which the basket is tied.

A swarm of bees 35 feet above the ground can be reached by it, and a little jar under the cluster secures the bees in the basket. It is very easily made, inexpensive, and I am sure there can be none better.

The corn-popper catcher is thus mentioned:

The lid of the popper was thrown back, and the popper itself was crowded up gently against the lower end of the cluster. The bees very soon rolled over and over each other until the popper was level full of them. The wire-cloth top was thrown over, and snapped shut. We did not know whether he had secured the queen or not. It did not matter much, for half or two-thirds of the cluster was confined in the popper, and the queen, if outside, together with the remaining bees, would cluster around their captive comrades. We thrust the handle down into the soft dirt near where the bees were flying quite thick, and the popper was thus supported a couple of feet from the ground, where the bees could get at them. We then left them for an hour or so. When we returned, all the outside bees were clustered around the popper. They were now in such shape that we could carry them where we pleased, and hive them where we pleased, which we did with entire success.

Mr. A. E. Manum's method of catching and hiving swarms is thus described by him, after stating that he clipped the wings of all his queens:

I will first give a description of my swarm-catcher; and as there is no patent on it, all are at liberty to make and use the same. It is simply a wire-cloth cage fastened to a pole with two legs, so attached to the pole that they can be set out or in, something like a tripod. The lower end of the pole may be sharpened, to stick in the ground, in order to steady the catcher, and to prevent it from being tipped forward by the weight of the bees.

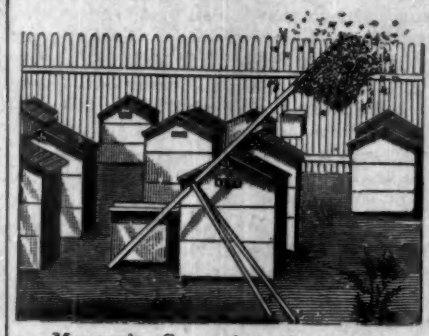
The head, or cage, is 10x10 inches square by 1¾ thick, and is covered on each side with wire cloth. It is made in two parts, and hinged together, so as to open and close. When closed it is held together by a small hook. One of the parts of the head is fastened to the pole, forming a catcher, as may be imagined by referring to the cut.

The head is made of ⅞x⅞ inch stuff, hence is very light. I usually furnish 8 or 10 of these catchers to each of my apiaries.

Now, as we have our catchers all made and ready for use, by having them distributed through the apiary in order to have them handy, we will proceed to catch that swarm that is just coming out. We will take this catcher here, and open it; hold it to the entrance, and catch what bees we can; close it, and lay it on the ground near by, and watch for the queen. As she comes out, catch and put her in the catcher with the bees. Now set up the machine in some shady place, if convenient. The buzzing of the bees and the scent of the queen will soon attract the swarm, when all will alight on the catcher, where they may remain until we are ready to hive them; and if we fear another swarm may issue before these are hived, they may be covered with a sheet.

See! there comes another swarm! run with another catcher, and proceed as before, and set this catcher some distance from the first, if we wish to hive the swarms separately. Although the first is covered with a sheet, it is safer to set them apart. In this way we can catch all the swarms that issue, and not be bothered by their clustering together, providing they do not all come out together.

When all have clustered, we may proceed to hive each separately, or two or three together, by taking up a catcher and bees, and



Manum's Swarming Apparatus.

carrying them to the hive previously prepared. We shake off the outside bees in front of the hive, and then open the catcher, and shake out the queen and bees, and the work is done.

If two or more swarms issue at one time, we proceed to catch the few bees and queens as before, using a catcher for each swarm (hence the necessity of several catchers); and, as is usually the case when more than one swarm issues at one time, they will mingle and cluster together. In such case we set the catchers near together, and await the results. If more bees settle on one catcher than on the others, we shake them off from this one; and on rising they will almost always divide up equally, each swarm clustering around its queen.

If we are too long a time in catching the queens and setting up the catchers, the bees may commence to cluster on a tree. In such a case it is better to set all the catchers under the cluster; that is, in the tree; and with a pole with a hook on the end, shake the bees off. Upon rising they will likely locate their queens; if not, shake them off again, and they will soon all separate, each swarm clustering with its queen, to the great delight of the apiarist.

There are many other ways to use these catchers that will suggest themselves during the swarming season.

Whereupon Mr. Root remarks as follows:

Our friend Mr. Manum is quite an extensive apiarist. In a private note we received from him, he said he was then locating his seventh out-apiary, so our readers may judge somewhat of the amount of experience he necessarily has had among bees, and of his ability to judge of a simple and practical swarming apparatus.

Just here it occurs to us that there are two ideas worth bringing up. The first is, that, if the queens are not clipped, the queen herself will usually be found on the outside of the cluster, or near the bottom end, for, it is said, bees will never hang to the queen. If, therefore, the corn-popper cage or other receptacle be pushed gently against the lower end of the swarm, you are likely to secure not only the larger portion of the bees, but the queen also; and in this event your swarming is practically done. The other idea is this: After these wire-cloth cages, such as the corn-popper and Manum's arrangement, have been used a few times for catching swarms, they will acquire the scent of the laying queen, and of former swarms. The catcher will, in consequence, be more readily accepted for clustering by succeeding swarms. In time these cages will have little bits of wax adhering to them, and these, also, form no small part of the attraction.

Dangerously Stung by Bees.—The following item from the New York *Weekly Post*, has been passing the rounds of the press for the past two or three weeks:

XENIA, O., May 23.—George Hamill, a young farmer residing two miles north of this city, was attempting to hive a swarm of bees yesterday, when they settled on his head, face and neck. He began to fight them, and they began to sting. In a short time he was on the ground writhing in terrible agony; and when his wife and mother came to his aid with brooms, he was nearly dead. He became unconscious, and remained so for some time, his head and hands swelling up so as to make him unrecognizable. He is in a serious condition.

We do not know how much the above report has been exaggerated. In any case, it was very unwise in the young farmer to strike at and fight the bees, as he is reported to have done. If they started to cluster on his person, he should first attempt to jar them off gently, and then walk quietly away for the time being, until they found some other object on which to cluster. A few puffs from a bee-smoker would also have removed them. We thought best to insert the item, to warn our friends against striking bees, or fighting them when there are so many in the air that they can do a great deal of mischief. We presume the young farmer recovered, as we have seen nothing ing in print to the effect that he he did not.—*Gleanings.*

The Supreme Court of the United States is a tribunal that exercises an immense influence, but is little known to the people. Ausburn Towner, in *Frank Leslie's Popular Monthly* for July, gives a very interesting account of the Justices, the room where they sit in judgment, their residences, as well as portraits, views, etc., that will open up the judiciary to all. In "The Rides of the World," Noel Ruthven takes up an attractive subject, and treats it in a most fascinating manner. The famous rides: Bois de Boulogne, at Paris, Rotten Row, London, Central Park, New York, the Vienna Prater, and Berlin's renowned "Unter den Linden," day by day see the wealthy and fashionable dashing by in elegant turnouts drawn by splendid specimens of horseflesh.

Bogus Comb Honey.—To its shame be it known that in the light of all that has been said, written and printed about the manufacture of comb honey being an impossibility, the *Grocers' Vindicator* of Chicago, has lately printed the following stupid and malicious falsehood :

The experts are in the "honey-humbug business," of which fact, perhaps, some of our readers are not aware ; but for a long time there has been comb honey on the market which looks very fine and inviting, but it contains very little of the pure honey. It does seem strange that an article like honey should be allowed to be meddled with and so completely adulterated as to contain but a portion of the real honey ; but such is the case, and to that extent that we would say to our readers that it is harly safe to expect the pure honey from almost any source. The following is interesting ; read it :

"I never saw honey look like that," remarked a reporter, who had ordered toast and honey for his breakfast. "I never saw a honey-comb look so white or so uniform." "Well, sir," replied the waiter, "I'll let you into the secret. That is manufactured honey. The comb is manufactured now of a white wax. Molds are made to the shape and size required, and the heated wax is poured in and becomes an imitation of honey-comb. A piece of this comb is placed in the jar, and the syrup poured in. They can't make a good imitation, though ; nearly every one who calls for honey detects the imitation. The wax is whiter, and then it is unpleasant if you should get it into the mouth. It is much cheaper than real comb honey, and sometimes the supply of honey runs short, and the manufactured honey has to be used."

The fact is, that this stupid humbug has been so often exposed that it is somewhat monotonous ! Why is it that editors of respectable sheets should so often be deceived ? There is only one excuse that can be offered, and that is—ignorance !

We have hunted down many similar statements—and they are always without foundation, except that Jones told Smith that Benson told him that a friend had seen such things made in New York, Chicago, or some other place ! ! Here is a little experience of Mr. M. H. Tweed, of Allegheny, Pa., as related in *Gleanings :*

A short time ago a drummer, traveling for a Baltimore fish-house, was standing in a store as I was delivering honey in glasses, comb and extracted together. He picked up a glass and asked if it was pure, with the air of a man who thought that he knew it was not, but simply wished to see if I would tell a lie about it. I answered him that it was pure, and asked if there was such a thing as manufactured comb honey. He looked at me as though he thought I was a fool to ask such a question, as he replied, "Certainly they do."

I said, "My friend, have you seen it made ?"

"Yes, sir," he replied.

I then said to him, "I am glad I have met you, for I have heard that story about manufactured comb for several years past, but you are the first man that I have come across who has seen it done. Now, where did you see it made ?"

"Out in Ohio," was his answer.

"Ohio ! that's a big place. Where did you see it made there ?"

He replied with some hesitation, "On the Western Reserve."

I said, "That is a big place too ; where did you see it made on the Western Reserve ?"

With a great deal less confidence, he replied, "In Orrville."

"Orrville ?" I said, "that small country town ? I have been there ; who makes it there ?"

Being fairly cornered he replied, "Well, there was a man told me he saw it made there."

Now, you see had I not cornered him he would have explained to the grocer all about how the comb was manufactured. You will easily see that his knowledge came simply through some man in Orrville having been seen making foundation comb ; and by the time two or three smart fellows repeat it, the cells are completed, filled, and capped.

In order to counteract the baneful influence of such falsehoods, Mr. Root has issued the following "card," to which we call especial attention. Copies of it can be had of him, free of cost, by any one who can use them to advantage in attempting to refute the current lying about comb honey being adulterated. It reads thus :

TO WHOM IT MAY CONCERN.

In view of the false and damaging statements to the honey business, in regard to making comb honey by machinery, etc., I have thought best to silence all such falsehoods as they come up, by the following offer : I will pay $1,000 in cash to any person who will tell me where comb honey is manufactured by machinery ; or I will pay the same sum to any one who will find manufactured comb honey on the market, for sale. I am as safe in making this offer, dear friends, as I should be if it were strawberries or hens' eggs. It never has been done, and it never will be done. If you wish to know whether I am responsible for the above amount or not, go to any bank and ask them to quote my standing in Dun's or Bradstreet's Commercial Agency, or write to the First National Bank of Medina. A. I. ROOT,

Editor of Gleanings in Bee-Culture,
Medina, Ohio.

Mr. Root profoundly remarks that the traveling men, who have done so much to spread these lies, should be taught that "telling lies is dangerous business in this present progressive age of the world." Let all such now be required either to "*put up*" the proof, or "*shut up !*"

The Apiarian Exhibit at Cincinnati, under the Governmental supervision, is provided for, and the following circular has been issued and sent to prominent apiarists :

U. S. Department of Agriculture.

HINSDALE, Du Page Co., Ill., June 15, 1888.

DEAR SIR :—Each one of the divisions of the United States Department of Agriculture is expected to contribute to the exhibit to be made by the Department at the Cincinnati Exposition, opening July 4.

I have just been instructed by Dr. C. V. Riley, the United States Entomologist, to make a collection of devices and implements used in bee-keeping, such as will represent the progress in the art in the United States, from the time when "log-gums" and box-hives were in common use, to the present time.

This collection will form a part of the exhibit to be made by the Division of Entomology at the coming Cincinnati Expostion. At the close of the Exposition, Nov. 1, this collection will be removed to Washington, D. C., and placed in a suitable apartment already set apart for the purpose in the National Museum, where it will permanently remain.

I would be glad to receive from you such contributions to this collection as you may be willing to make, either as a donation or as a loan for the Exposition. As far as possible, it is desired that the contributions be donated for permanent exhibition in the National Museum. The name and address of each contributor, and the purpose for which the device is used, will be attached to each article exhibited. Any article simply loaned will be returned at the close of the Exposition. If articles are sent by mail, the postage will be refunded. If sent by express, the express charges will be paid both ways by the Department.

You cannot fail to appreciate the great advantage you may receive from placing on exhibition such articles or devices as you may manufacture or offer for sale, both at the Cincinnati Exposition and also in the permanent exhibit in the National Museum at Washington, where they may be seen by tens of thousands every year.

It is believed that all bee-keepers will be interested in having a creditable display in the interest of our pursuit. The time allowed is altogether too short to do what might be done, and prompt action is necessary. Please write me *at once*, saying what you are willing to contribute permanently, or loan for the Exposition. *I will write* accepting such of those things you offer as I shall need, and will give shipping directions with acceptance. This method is adopted *to avoid the sending of duplicates* of the same devices or objects of interest.

Soliciting your hearty co-operation *and an immediate reply*, I remain, Very truly yours, N. W. MCLAIN,

Apicultural Agent.

T. D. Williams, who lived alone in Lebanon, Conn., was found dead on June 12, under a tree. He was 76 years of age, and while trying to hive a swarm of bees, he fell and broke a leg, and the New Haven *Palladium* says that he was stung to death by the bees. They probably had been "angered" by the accident in some way.

A man 76 years of age should not climb trees ; especially if he lives alone, he should not take the risk of falling and dying when no assistance could be obtained.

Contraction of Entrances to Hives.—J. F. Gile, of Basswood, Wis., on June 11, 1888, asks for the following information :

State all circumstances under which the entrance to the Langstroth Simplicity hive should be contracted, especially with reference to newly-hived swarms.

Whenever the bees need protection, contract the entrance. Robbers sometimes trouble them, and disaster can be prevented by helping the bees in this way, to defend the hive against marauders.

CONVENTION DIRECTORY.

1888.	*Time and Place of Meeting.*
Aug. 3.	Ionia County, at Ionia, Mich. H. Smith, Sec., Ionia, Mich.
Aug. 14.	Colorado State, at Denver, Colo. J. M. Clark, Sec., Denver, Colo.
Aug. 27.	Stark County, at Canton, O. Mark Thomson, Sec., Canton, O.
Sept. 8.	Susquehanna County, at Montrose, Pa. H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

GLEANS OF NEWS.

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See! there comes another swarm! run with another catcher, and proceed as before, and set this catcher some distance from the first, if we wish to hive the swarms separately. Although the first is covered with a sheet, it is safer to set them apart. In this way we can catch all the swarms that issue, and not be bothered by their clustering together, providing they do not all come out together.

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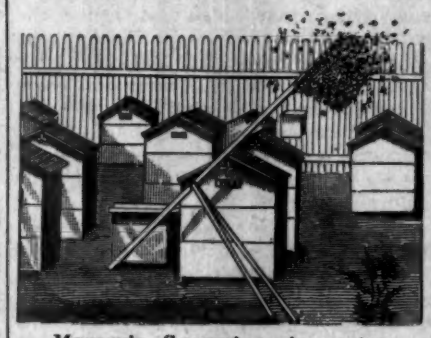

Manum's Swarming Apparatus.

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There are many other ways to use these catchers that will suggest themselves during the swarming season.

Whereupon Mr. Root remarks as follows:

Our friend Mr. Manum is quite an extensive apiarist. In a private note we received from him, he said he was then locating his seventh out-apiary, so our readers may judge somewhat of the amount of experience he necessarily has had among bees, and of his ability to judge of a simple and practical swarming apparatus.

Just here it occurs to us that there are two ideas worth bringing up. The first is, that, if the queens are not clipped, the queen herself will usually be found on the outside of the cluster, or near the bottom end, for, it is said, bees will never hang to the queen. If, therefore, the corn-popper cage or other receptacle be pushed gently against the lower end of the swarm, you are likely to secure not only the larger portion of the bees, but the queen also; and in this event your swarming is practically done. The other idea is this: After these wire-cloth cages, such as the corn-popper and Manum's arrangement, have been used a few times for catching swarms, they will acquire the scent of the laying queen, and of former swarms. The catcher will, in consequence, be more readily accepted for clustering by succeeding swarms. In time these cages will have little bits of wax adhering to them, and these, also, form no small part of the attraction.

Dangerously Stung by Bees.—The following item from the New York *Weekly Post*, has been passing the rounds of the press for the past two or three weeks:

XENIA, O., May 23.—George Hamill, a young farmer residing two miles north of this city, was attempting to hive a swarm of bees yesterday, when they settled on his head, face and neck. He began to fight them, and they began to sting. In a short time he was on the ground writhing in terrible agony; and when his wife and mother came to his aid with brooms, he was nearly dead. He became unconscious, and remained so for some time, his head and hands swelling up so as to make him unrecognizable. He is in a serious condition.

We do not know how much the above report has been exaggerated. In any case, it was very unwise in the young farmer to strike at and fight the bees, as he is reported to have done. If they started to cluster on his person, he should first attempt to jar them off gently, and then walk quietly away for the time being, until they found some other object on which to cluster. A few puffs from a bee-smoker would also have removed them. We thought best to insert the item, to warn our friends against striking bees, or fighting them when there are so many in the air that they can do a great deal of mischief. We presume the young farmer recovered, as we have seen nothing ing in print to the effect that he he did not.—*Gleanings.*

The Supreme Court of the United States is a tribunal that exercises an immense influence, but is little known to the people. Ausburn Towner, in *Frank Leslie's Popular Monthly* for July, gives a very interesting account of the Justices, the room where they sit in judgment, their residences, as well as portraits, views, etc., that will open up the judiciary to all. In "The Rides of the World," Noel Ruthven takes up an attractive subject, and treats it in a most fascinating manner. The famous rides: Bois de Boulogne, at Paris, Rotten Row, London, Central Park, New York, the Vienna Prater, and Berlin's renowned "Unter den Linden," day by day see the wealthy and fashionable dashing by in elegant turnouts drawn by splendid specimens of horseflesh.

Bogus Comb Honey.—To its shame be it known that in the light of all that has been said, written and printed about the manufacture of comb honey being an impossibility, the *Grocers' Vindicator* of Chicago, has lately printed the following stupid and malicious falsehood:

The experts are in the "honey-humbug business," of which fact, perhaps, some of our readers are not aware; but for a long time there has been comb honey on the market which looks very fine and inviting, but it contains very little of the pure honey. It does seem strange that an article like honey should be allowed to be meddled with and so completely adulterated as to contain but a portion of the real honey; but such is the case, and to that extent that we would say to our readers that it is harly safe to expect the pure honey from almost any source. The following is interesting; read it:

"I never saw honey look like that," remarked a reporter, who had ordered toast and honey for his breakfast. "I never saw a honey-comb look so white or so uniform." "Well, sir," replied the waiter, "I'll let you into the secret. That is manufactured honey. The comb is manufactured now of a white wax. Molds are made to the shape and size required, and the heated wax is poured in and becomes an imitation of honey-comb. A piece of this comb is placed in the jar, and the syrup poured in. They can't make a good imitation, though; nearly every one who calls for honey detects the imitation. The wax is whiter, and then it is unpleasant if you should get it into the mouth. It is much cheaper than real comb honey, and sometimes the supply of honey runs short, and the manufactured honey has to be used."

The fact is, that this stupid humbug has been so often exposed that it is somewhat monotonous! Why is it that editors of respectable sheets should so often be deceived? There is only one excuse that can be offered, and that is—ignorance!

We have hunted down many similar statements—and they are always without foundation, except that Jones told Smith that Benson told him that a friend had seen such things made in New York, Chicago, or some other place! Here is a little experience of Mr. M. H. Tweed, of Allegheny, Pa., as related in *Gleanings*:

A short time ago a drummer, traveling for a Baltimore fish-house, was standing in a store as I was delivering honey in glasses, comb and extracted together. He picked up a glass and asked if it was pure, with the air of a man who thought that he knew it was not, but simply wished to see if I would tell a lie about it. I answered him that it was pure, and asked if there was such a thing as manufactured comb honey. He looked at me as though he thought I was a fool to ask such a question, as he replied, "Certainly they do."

I said, "My friend, have you seen it made?"

"Yes, sir," he replied.

I then said to him, "I am glad I have met you, for I have heard that story about manufactured comb for several years past, but you are the first man that I have come across who has seen it done. Now, where did you see it made?"

"Out in Ohio," was his answer.

"Ohio! that's a big place. Where did you see it made there?"

He replied with some hesitation, "On the Western Reserve."

I said, "That is a big place too; where did you see it made on the Western Reserve?"

With a great deal less confidence, he replied, "In Orrville."

"Orrville?" I said, "that small country town? I have been there; who makes it there?"

Being fairly cornered he replied, "Well, there was a man told me he saw it made there."

Now, you see had I not cornered him he would have explained to the grocer all about how the comb was manufactured. You will easily see that his knowledge came simply through some man in Orrville having been seen making foundation comb; and by the time two or three smart fellows repeat it, the cells are completed, filled, and capped.

In order to counteract the baneful influence of such falsehoods, Mr. Root has issued the following "card," to which we call especial attention. Copies of it can be had of him, free of cost, by any one who can use them to advantage in attempting to refute the current lying about comb honey being adulterated. It reads thus:

TO WHOM IT MAY CONCERN.

In view of the false and damaging statements to the honey business, in regard to making comb honey by machinery, etc., I have thought best to silence all such falsehoods as they come up, by the following offer: I will pay $1,000 in cash to any person who will tell me where comb honey is manufactured by machinery; or I will pay the same sum to any one who will find manufactured comb honey on the market, for sale. I am as safe in making this offer, dear friends, as I should be if it were strawberries or hens' eggs. It never has been done, and it never will be done. If you wish to know whether I am responsible for the above amount or not, go to any bank and ask them to quote my standing in Dun's or Bradstreet's Commercial Agency, or write to the First National Bank of Medina.

A. I. ROOT,
Editor of Gleanings in Bee-Culture,
Medina, Ohio.

Mr. Root profoundly remarks that the traveling men, who have done so much to spread these lies, should be taught that "telling lies is dangerous business in this present progressive age of the world." Let all such now be required either to "*put up*" the proof, or "*shut up!*"

The Apiarian Exhibit at Cincinnati, under the Governmental supervision, is provided for, and the following circular has been issued and sent to prominent apiarists:

U. S. Department of Agriculture.

HINSDALE, Du Page Co., Ill., June 15, 1888.

DEAR SIR:—Each one of the divisions of the United States Department of Agriculture is expected to contribute to the exhibit to be made by the Department at the Cincinnati Exposition, opening July 4.

I have just been instructed by Dr. C. V. Riley, the United States Entomologist, to make a collection of devices and implements used in bee-keeping, such as will represent the progress in the art in the United States, from the time when "log-gums" and box-hives were in common use, to the present time.

This collection will form a part of the exhibit to be made by the Division of Entomology at the coming Cincinnati Expostion. At the close of the Exposition, Nov. 1, this collection will be removed to Washington, D. C., and placed in a suitable apartment already set apart for the purpose in the National Museum, where it will permanently remain.

I would be glad to receive from you such contributions to this collection as you may be willing to make, either as a donation or as a loan for the Exposition. As far as possible, it is desired that the contributions be donated for permanent exhibition in the National Museum. The name and address of each contributor, and the purpose for which the device is used, will be attached to each article exhibited. Any article simply loaned will be returned at the close of the Exposition. If articles are sent by mail, the postage will be refunded. If sent by express, the express charges will be paid both ways by the Department.

You cannot fail to appreciate the great advantage you may receive from placing on exhibition such articles or devices as you may manufacture or offer for sale, both at the Cincinnati Exposition and also in the permanent exhibit in the National Museum at Washington, where they may be seen by tens of thousands every year.

It is believed that all bee-keepers will be interested in having a creditable display in the interest of our pursuit. The time allowed is altogether too short to do what might be done, and prompt action is necessary. Please write me *at once*, saying what you are willing to contribute permanently, or loan for the Exposition. *I will write* accepting such of those things you offer as I shall need, and will give shipping directions with acceptance. This method is adopted *to avoid the sending of duplicates* of the same devices or objects of interest.

Soliciting your hearty co-operation *and an immediate reply*, I remain, Very truly yours,

N. W. MCLAIN,
Apicultural Agent.

T. D. Williams, who lived alone in Lebanon, Conn., was found dead on June 12, under a tree. He was 76 years of age, and while trying to hive a swarm of bees, he fell and broke a leg, and the New Haven *Palladium* says that he was stung to death by the bees. They probably had been "angered" by the accident in some way.

A man 76 years of age should not climb trees; especially if he lives alone, he should not take the risk of falling and dying when no assistance could be obtained.

Contraction of Entrances to Hives.—J. F. Gile, of Basswood, Wis., on June 11, 1888, asks for the following information:

State all circumstances under which the entrance to the Langstroth Simplicity hive should be contracted, especially with reference to newly-hived swarms.

Whenever the bees need protection, contract the entrance. Robbers sometimes trouble them, and disaster can be prevented by helping the bees in this way, to defend the hive against marauders.

CONVENTION DIRECTORY.

1888.	*Time and Place of Meeting.*
Aug. 3.	Ionia County, at Ionia, Mich. H. Smith, Sec., Ionia, Mich.
Aug. 14.	Colorado State, at Denver, Colo. J. M. Clark, Sec., Denver, Colo.
Aug. 27.	Stark County, at Canton, O. Mark Thomson, Sec., Canton, O.
Sept. 8.	Susquehanna County, at Montrose, Pa. H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

QUERIES AND REPLIES.

The Space Allowed Around Brood-Frames, etc.

Written for the American Bee Journal

Query 554.—1. In hanging frames as long and as shallow as the Langstroth, what space would you allow between the ends of frames and the hive? 2. What space between the tops of the frames and the surplus boxes? 3. How much space between each end of the top-bar and the hive, to prevent gluing, and admit of being easily handled?—Ohio.

To all of your questions I say ⅜ of an inch.—P. L. VIALLON.

1. ⅜ of an inch. 2. A double bee-space. 3. 5-16 of an inch.—A. B. MASON.

1. ⅜ of an inch. 2. 5-16 of an inch. 3. 5-16 of an inch.—MRS. L. HARRISON.

1. ⅜ of an inch. 2. ⅜ to ½ of an inch. 3. Very little, if any.—DADANT & SON.

1. ⅜ of an inch. 2. ½ of an inch. 3. 3-16 of an inch is sufficient.—J. P. H. BROWN.

1. and 2. ⅜ of an inch. 3. It is not important—A. J. COOK.

1. 5-16 of an inch. 2. The same as at the sides. 3. 1-32 of an inch.—G. M. DOOLITTLE.

1. ⅜ of an inch. 2. About 5-16 of an inch. 3. ½ of an inch would prevent gluing, but I prefer 1-32 of an inch.—R. L. TAYLOR.

1. Anywhere from a bee-space to ⅜ of an inch. 2. A bee-space. 3. The same.—EUGENE SECOR.

1. ½ of an inch. 2. A bee-space. 3. ½ of an inch is enough. The bees will glue, no matter what the spacing may be.—M. MAHIN.

1 and 2. ⅜ of an inch. 3. Bees will daub their glue. I leave about 1-16 of an inch.—J. M. HAMBAUGH.

1 and 2. In both cases, ⅜ of an inch, rather less than more. 3. ½ of an inch is about right.—C. H. DIBBERN.

1. A full bee-space, say large ½ inch. 2. A little less space than between the ends. 3. Just enough so that the frames can be easily removed.—J. E. POND.

1. ⅜ of an inch. 2. Scant ⅜ of an inch, if no honey-board is used. 3. ½ of an inch, if any.—JAMES HEDDON.

1. Not less than ½ of an inch, nor more than ⅝ of an inch. 2. About an inch. 3. My bees will glue, no matter what space. The space in my hives is about 1-16 of an inch.—C. C. MILLER.

1. ⅜ of an inch. 2. 5-16 of an inch works the best for me. 3. I cut the top-bars of my frames about ⅛ shorter than the space in which they are to hang. I do not mind having the ends of the frames glued fast; it holds the frames in place when I move the hives about at swarming time.—G. W. DEMAREE.

1. ⅜ of an inch. 2. ½ to ⅝ of an inch from the frames to the honey-board. The honey-board should be ¼ of an inch thick, and then ½ to ⅝ inch space from the honey-board to the sections. 3. Make the ends of the top-bars pointed, and allow them to just touch the hive.—J. M. SHUCK.

1. I do not allow over 5-16 of an inch. The space usually provided is ⅜. 2. ½ to 5-16 of an inch. 3. The top-bar should have movement endwise in the rabbet, of not less than 1-16 of an inch.—G. L. TINKER.

1. ⅜ of an inch. 2. Use a double-space of 5-16 of an inch each. 3. 1-32 of an inch in this locality; in some localities you would want ½ to ⅝ of an inch on account of propolis.—H. D. CUTTING.

Each question may be answered by saying, give from ½ to ⅝ of an inch of space.—THE EDITOR.

Queen-Excluders and Break-Joint Honey-Boards.

Written for the American Bee Journal

Query 555.—When working for comb honey with an ordinary-sized brood-chamber contracted to 5 frames, or with one section of a shallow reversible hive, is it always necessary to a use a queen-excluder, or will the slatted break-joint honey-board keep the bees from going into the surplus sections?—Minn.

I much prefer the queen-excluder.—G. M. DOOLITTLE.

It is not always necessary.—J. P. H. BROWN.

We do not contract the brood-chamber.—DADANT & SON.

In that case a queen-excluder is always necessary.—M. MAHIN.

You would want a good queen-excluder.—H. D. CUTTING.

No; I should hope not. If it did, I would not use it.—A. B. MASON.

I think the slatted break-joint honey-board will answer.—MRS. L. HARRISON.

I should always use a queen-excluder on so small a hive.—EUGENE SECOR.

I prefer the zinc perforated board, as the slatted break-joint honey-board does not always prevent the queen from going into the surplus arrangement. These boards are not used to prevent bees from going to any part of the hive.—P. L. VIALLON.

I have not found it necessary with the Langstroth frame, but with a single section of the new Heddon hive, I find it is.—R. L. TAYLOR.

Usually they will not go up, but it is safer to use a queen-excluding honey-board.—A. J. COOK.

I would use the queen-excluder, everytime. I have never used the break-joint honey-board.—J. M. HAMBAUGH.

A queen-excluder will certainly be needed, if the colony is in a normal condition and storing honey.—J. M. SHUCK.

It is necessary in all cases to use a wood-and-zinc honey-board in contracting the brood-chamber.—G. L. TINKER.

If you contract the brood-nest, you must put on a queen-excluder, or you will make a bad job of it. A "honey-board" is no hindrance to the queen going above.—G. W. DEMAREE.

As I do not work for comb honey in this way, and do not consider the plan of so doing practical or practicable, I cannot answer the question.—J. E. POND.

Without any queen-excluding honey-board, I find that with the brood-chamber contracted to 5 Langstroth frames, or one-half of the divisible brood-chamber, about one queen in 50 or 75 will go above and lay a few eggs.—JAMES HEDDON.

I have serious doubts whether a queen-excluding honey-board "pays" in an ordinary sized hive. I have found the slatted honey-board all that is required when using Langstroth hives.—C. H. DIBBERN.

With such a shallow or contracted hive it would probably be desirable to use the queen-excluding honey-board.—THE EDITOR.

The Queries written for and answered in the AMERICAN BEE JOURNAL have often been quoted not only in our British namesake, but also have been translated into other languages and published in the bee-periodicals of many nations. It is very flattering to know that they are of so much interest as to call for such reproduction and translation. The corps of contributors who make the replies may feel highly honored while knowing that their labors are appreciated both at home and abroad.

Give a Copy of "Honey as Food and Medicine" to every one who buys a package of honey. It will sell lots of it.

ORRESPONDENCE.

YOUNG QUEENS.

e Balling of Young Queens by the Bees.

ritten for the American Bee Journal

BY D. MILLARD.

was much interested in the state-nts of Mr. Demaree, in answer to ery 543, on page 326. That un-ountable disposition of bees to ill" their young queens was once a y perplexing problem to me. I nt much time, but patiently watched observed, till I thought that I ld see light upon the matter. I ex-erimented further, and the light ne brighter, until the whole matter med perfectly plain to me.

agree with Mr. D., that a young en seldom if ever makes the mis-e of entering the wrong hive. That is signalled or saluted by her own s is, I think, equally true, provid-that the colony or nucleus, as the e may be, has a supply of young s just commencing to fly.

A colony of bees that has been eenless for a great length of time, l usually accept a queen-cell, or a gin-queen may be introduced, and will be allowed to roam through hive unmolested until she is dis-ed to take a flight, when the old s will frown upon her; and if she sists in doing a little "side-walk-" up and down the alighting-board, t to attract attention, they will tell to just get inside and behave her-f, or off comes her crown.

f the queen walks out and stays a le too long, or returns with her uffle" a little ruffled, she receives eprimand that costs her life. But here are plenty of young bees in hive, of about the same age, they l go out together, and have a happy e flitting up and down the alight-g-board; and if she flies off and is ne for a time, her young compan-s are all the more pleased to meet l salute her on her return, and thus "signal" alluded to by Mr. D. hich lack of space undoubtedly for-le its explanation, and the lack of ng bees at the time of the young eens taking their flight), is all there of that unaccountable disposition of es to ball and destroy the queen, or use her entrance to the hive.

If the apiarist has a colony of bees at has been queenless long enough run out of brood, he should intro-ce a frame of capped brood in time have it hatch, and the bees old enough to begin to fly when this young queen is old enough to mate. Never give a queenless colony of all old bees much unsealed brood, but give capped brood, and when part are hatched, give eggs and larvæ, and the newly-hatched bees will care for it and rear themselves a queen, which they will associate with and guard until she begins to lay, and then assist in driving out all laying workers.

The ancient rule was, "Old men for counsel, but young men for war." Applied to apiculture it would be thus: "Old bees for gathering honey and pollen, and young bees for inside work." But do not allow any colonies to become queenless and remain so, is my rule.

Mendon, Mich.

SCIENTIFIC.

Medicinal Qualities of Honey Explained.

Written for the British Bee Journal

BY R. A. H. GRIMSHAW.

We should like to inquire into the reasons why, or in what respect, honey is a medicine; supposing we take it as admitted that such is the case, an assumption many medical men might object to, seeing that the position of honey in the British Pharmacopœia is such a very modest one, its use being chiefly that of a vehicle for other medicines, and as an adjunct to gargles. I should say that children in the stages requiring *Mel boracis* receive the greatest share of the officinal preparations of honey. True, oxymel (a mixture of honey, acetic acid and water) is used as a demulcent, softening mucus lodging in the air-passages and facilitating its expectoration. In my own household, however, I prefer the use of citric acid to acetic.

In bronchitis, pure honey and simple is always at hand, and more relief is obtained by frequently tasting it than from anything else. Nearly twenty years ago I found the greatest benefit in an attack of quinsy, by using a gargle of red sage, acidulated with vinegar, and well sweetened with honey. Honey *ad libitum* as a laxative, and mixed with borax for thrush, is, of course, a common household medicine for children. We will leave out of our view the value of honey as a food, as a heat-producer, consisting, as it does principally, of carbon and water, the two sugars dextrose and levulose, invert sugar. We know it is readily assimilated in the stomach, and should be eaten with some attenuating substance, such as bread.

Mr. Cheshire, in "Honey as Food," tells us: "Why honey has a curative effect it is difficult to say for certain, but one may theorize, and ascribe this fact to the readiness with which it combines with mucous tissue. Honey is variable, and therefore its value as a medicine cannot always be the same."

In "Honey as Food and Medicine," we have a list of prescriptions which are almost incredulously efficacious, a few of which may be named as startlers: Inflammation and congestion of the lungs followed by unconsciousness were cured by eating honey at all times of the day and night, until 10 pounds were consumed. Herr Karl Gatter was at the verge of the grave, and was restored to perfect health by the use of honey. Consumption is cured by it, and in ancient times it was used as a means of securing long life, and it is said to be an excellent remedy in diseases of the bladder and kidneys. The recipes are:

For asthma, honey of squills, honey cough syrup, eye-wash, balsam of honey, for croup, for bronchitis, honey salve, for coughs, colds, whooping cough, etc.; honey-wash for the eyes, gargle for sore throat, cancer plaster, honey-cough medicine, honey and tar cough candy, honey for sore eyes, honey and walnut cough candy, remedy for whooping cough, colds, etc.

Granting that all these prescriptions are good and effectual, what is there about honey that is absent in sugar which brings about such apparently wonderful results? It is in this direction we will turn our gaze.

We know the effect produced upon the nerves at the roots of our teeth by bringing them into contact with fresh honey, strong in acid, and it may be that the excess of formic acid secreted by the bees is used by it in giving its honey this strong acid reaction. Indeed, it is not beyond the bounds of reason to suppose that the supply of this acid to the bee is not intended for use so much as sting poison as for purely domestic purposes. There is not much doubt that the acid contained in honey is beneficial to both stomach and liver.

What else is there in honey? Well, myriads of pollen-grains, and these contain chemical principles of undoubted medical potency. Putting aside the husks (the extine and intine of the pollen grain) the outermost skin is found to be reticulated with ridges, the seat of a secretion of sticky oil. The contents are a sticky fluid rich in protoplasm, sometimes transparent, sometimes opaque, by reason of floating granules (fovilla), which granules are declared by Herapath to contain as much as 46 per cent. of a peculiar inflammable *azotized* (?) principle, insoluble in nearly every liquid. I imagine it is soluble by gastric juice.

These granules were found to be invisible in many fresh pollens, since the fluid in which they swim has the same refractive power as the granules; some of them are drops of oil, whilst others consist of proteine compounds.

Many pollen tubes will develop in nectar, by osmose of water, and produce in their own tubes other chemical combinations, and as the growth of these tubes often exceeds the diameter of the pollen grain by a hundred diameters, their chemical position in the honey must be somewhat considerable.

We have then (leaving the sugar of honey on one side) to deal with formic acid and the protoplasmic contents of pollen-cells, when we think of honey as a medicine.

The most important factor, in my opinion, remains yet to be considered. I allude to its flavor. Mr. Otto Hehner tells us "he has not been able by chemical means to distinguish between honey from one kind of flower and any other." We must all admit that such a difference exists. We know that honey collected from poisonous plants is materially affected by the active deleterious or objectionable or medicinal principle, secreted by such plant, the rhododendron family, azaleas and kalmias being an instance of this. Does it not follow, as nectar is a secretion and an exudation of the plant cell, that it is charged and pervaded by the active principle, beneficial or otherwise, of the plant? Many instances of the identity of the nectar flavor, and the distinguishing principle of the plant which secretes it, can be given:

Citric acid is found in fruits and flowers of the orange tribe.
Tartaric acid is found in grape juice.
Malic acid is found in the apple, gooseberry, etc.
Tannic acid is found in the oak, etc.
Hydr cyanic (prussic) is found in the cherry laurel.
Oxalic acid is found in sorrel and rhubarb.
Gallic is found in all kinds of galls.

Of poisonous principles we find alkaloids of—

Quinine in cinchona.
Morphine in opium.
Solanine in plants of the potato tribe.
Veratrine in sebadilla.
Aconitine in monkshood and aconites.
Strychnine in nux vomica.
Atropine in belladonna.
Piperine in pepper.
Theine or caffeine in tea and coffee.

Some of the most poisonous plants bear the gaudiest flowers, and such we know are peculiarly attractive to bees, whilst many plants unwholesome as food are invaluable as medicine. Most of the unbelliferæ are poisonous—the same may be said of the ranunculaceæ, *e. g.*, anemone, pulsatilla, delphinium, monkshood, aconitum vulgare. The poppy family, papaveraceæ, are notorious (P. somniferum). The crucifers are, however, non-poisonous.

When we come to the violet family we find one of our most valuable medicines (ipecacuanha), obtained from the root of a violet grown in Peru. The buckthorn (rhamnus) gives us a valuable medicinal fruit; from the spindle tree family we get the valuable active principle euonymine. The seeds of the laburnum are poisonous. The cherry tribe (containing the almond, peach, nectarine, etc.) yields us prussic acid; this acid is also secreted by plants of the plum tribe.

A common plant (fool's parsley), common in gardens, is poisonous, as are generally the umbelliferæ, wet places being their home as a rule, when this principle is developed. Wild lettuce and wild celery are poisonous, whilst most members of the compositæ are medicinal. It is curious also to note that the ling or heather (the source of so much fine honey), has in its family the azaleas, kalmias, etc. The periwinkle (vinca) family have amongst them the nux vomica, from which we extract strychnine, a deadly poison, but at the same time the most valuable tonic in the Pharmacopœia.

Entire plants are wild lettuce (Lactucin, similar to Manna).

The following are the parts of plants used in medical preparations:

	From	Is obtained
Twigs and Tops	Savin	(Savin oil).
	Broom tops	(Scoparin).
	Woody nightshade.	(Solanin, an alkaloid).
Flowers.	The Lavender	Oil of lavender.
	The Hop	Lupulin and Humulin.
	Peppermint	A volatile oil.
	Camomile	A volatile oil (Oleum Anthemidis).
	Orange Flowers	A volatile oil.
	Crocus	Saffron.
	Rosemary	A volatile oil.
	The Poppy	" "
	Elder	" "
Buds	Santonica (worm-Santonin, and a volatile oil seed).	
Barks	Larch	Resin, Tannic acid and Larixinic acid, crystal and volatile.
	Mezereon	A volatile oil.
	Oak	Tannic acid.
	Elm	" "
Leaves	Monkshood	Aconitia (A).
	Deadly nightshade.	Atropia (A).
	Hemlock	Conia (A), and a volatile oil.
	Foxglove	Digitalin (A).
	Henbane	Hyoscyamia (A).
	Cherry laurel	Prussic acid and a volatile oil.
	Stramony leaves	Daturia (A).
	Bearberry	Tannic, gallic acids, and volatile oil.
Roots	Monkshood	Aconitia (see Leaves).
	Deadly nightshade.	Atropia " "
	Colchicum	Colchicia (A).
	Gentians	Gentianite, a bitter principle.
	Dandelion	A bitter crystalline substance Taraxacin.
Fruits	Dill	Volatile oil.
	Anise	" "
	Carraway	" "
	Coriander	" "
	Fennel	" "
	Hemlock	Conia (A) see Leaves.
	Poppy	Opium from which Morphia.
Seeds	Colchicum	Colchicia (A) see Roots.
	Mustard	Myronic acid and a volatile oil.
	Stramony	Daturia (A) see Leaves.

When we come to examine these products of the plant, from its very summit to its roots, taking leaves, bark, flowers, fruit, seeds, on the way, we find what we may call the characteristic or active principle of the plant pervading its whole system, but appearing in a stronger form in some particular place. We must try to think of the plant as a simple aggregation of units, a mass of single cells, each of which is a laboratory in itself, forming of itself simple and complex compounds which it passes forward to its neighbors in order that they may be thereby further protected, and finally stored away for further use by the plant, or utilized by it as protective, resisting the attacks of birds, insects, and other animals, or else rendering the plant attractive to the particular animal whose services are desired.

Now the aroma of the plant is generally characteristic of its active principle, and this aroma appears in the nectar. The nectar owes its saccharine matter to the starch secreted by the single plant-cell from the carbonic acid of the atmosphere which it transforms into sugar, and flavors with its active principle. The sweet-scented sap exudes or transudes through the outermost cells, and appears as a degradation product in a similar fashion to resins and gums.

We find most active principles medicinal when taken in small doses, but distinctly poisonous in larger quantities; and again many of them are antidotal when taken together. Herein is a beautiful provision of nature exemplified in the minute quantities of medicinal matter gathered by the bee, and so mixed in its storehouse that strong doses are rendered almost impossible and innocuous.

The human system, however, when out of order (and it rarely, if ever, is in perfect health) has the faculty of sympathetically seizing hold of what it requires from the food to restore it to its normal state. Honey thus supplies us with numerous powerful agents in restoring to health disorded vital functions. I hold that the mixed honey, for these very reasons, is the healthiest and best for general use; that which bears distinct and pronounced flavor, at once betraying its origin, only so betrays it because it holds an undue proportion of the active principle of the plant whence gathered, be this beneficial or otherwise; and when honey is found to disagree with any one, it will probably be found to be honey of a distinct flavor.

We also lose sight of the fact when eating comb honey, that we swallow the waxen cell-wall which we are told is varnished over with a preparation (a sort of furniture polish) of the acid saliva of the bee and propolis—propolis consisting of powerfully medicinal exudations varying with the sources from which it is gathered.

Much that I have said is ideal and theoretical, but I think my conclusions are rational and practical, viz., that in dealing with honey we are dealing with a medium—nectar—flavored with powerful medical compounds whose

rmlessness is ensured by the won-ful antidotal mixing of the bee; the beneficial properties are still esent, ready to be seized upon by eased or disordered organs, and if re be anything in the science of nœopathic medicine, the curing of ease by minute infinitesimal doses such powerful drugs as produce *mptoms* of the disease in larger es, then a new line of thought is ened up, and considerable support ven to my hypothesis.

Horsforth, Leeds, England.

The above excellent article opens a wide field for interesting and ofitable research and investigation. at the many beautiful flowers, which delight and attract the bees, should ntain, besides food, much of medici-l value to the human family is not be wondered at; especially when it know that nothing has been created ich does not possess some value—en the thistle and dock, that are so ublesome to farmers, having their rticular uses. Let us hope that our e-keeping doctors and men of scien-c inclinations may look into this tter more fully, and thus perhaps cover in honey other health-restor-g virtues, which will add another rel to the crown of those whose siness it is to glean the sweets of ture to tempt and delight the palates mankind.—ED.]

MOVING BEES.

very Rough Experience Given in Detail.

Written for the American Bee Journal

BY H. E. HILL.

As the subject of "moving bees" is ceiving some attention at present, I ll relate a little experience of mine; t that the undertaking was anything very great," but to show how much knocking about" bees will stand, hen properly cared for.

The bees were in 3-frame Langstroth clei hives, with wire-screen over the p and bottom, with frames supported notched strips; but, doubtless, the oving could have been just as suc-ssfully accomplished had they been l colonies.

On the night of Oct. 14, 1886, 10 of ese little colonies were confined to e hives, and on the following day ey were expressed from Summit, N. to New York city. On Oct. 16, I nd them buzzing in a third-story room almost smothered by the smoke of a dozen or more cigars that were being smoked in the room, by those eagerly crowding around to see where the buzzing came from.

The bees were then placed in the elevator, let down, taken by a dray to the wharf, and placed on the deck of a Cuba bound steamer, where sponges of water were constantly kept on the screens, being refilled 8 or 10 times each day, and occasionally treating them to a sponge of sea-water, which they would drain in a short time.

Arriving at Havana five days later, they were placed in a small boat and taken ashore—a distance of about one mile—where they became the victims of the native "carretero," who "hustled" them over the cobble-stone pavements as though he was anxious to deliver as many loads as possible while the ship's cargo held out.

Arriving at the hotel, they were carried up into my room, where they remained for three days, being hauled again to the railroad depot across the city, thence by rail across the island to Batibano, on Oct. 24, and placed on board a Spanish coaster, which arrived at Cienfuegos on the following morning, when the bees were victimized a second time, in spite of all the English I used (which was just the same as so much Greek to him) to persuade the driver to "go slow."

Again to the hotel, and up-stairs, three days more in these quarters, when they were placed into a spring carriage, and driven into the country about three miles, arriving at La Gloria at 3 p.m. on Oct. 28. They were then released, and in less than 30 minutes several of the Jersey Italians returned to the hives laden with Cuban pollen.

Titusville, Pa.

FARM APIARIES.

Some Reasons for Having Bees on the Farm.

Read before the Farmers' Institute

BY T. S. SANFORD.

The honey-bee has been a topic for ancient writers, and from that time to the present, has received much time, attention and thought by our most practical and learned men. I am glad to see bee-culture given a place for discussion in our agricultural societies. Bee-culture is properly a branch of agriculture, and as such should be taught in every agricultural college.

The queen is, properly speaking, the "mother bee." She has no particular control over the colony other than her importance as mother bee. She does not lead the swarm, but is often among the last to leave the hive. She is capable of laying from one to three thousand eggs a day. This is doubted by some, but I have repeatedly seen her lay two and three eggs in a minute, which is over 3,000 in 24 hours. It is wonderful to see with what watchful care the bees follow her from comb to comb, making a way for her as she proceeds with her daily duties, depositing an egg in every empty cell. They can be seen continually offering her partly digested food, which she takes as required. If she had to eat honey and pollen and digest it herself, she could not lay twice her weight in eggs in one day. The life of the queen is from one to three years.

Worker bees are the smallest in the colony. They are rightly named workers, as the labor of the hive is performed by them. They build the comb—this wonderful comb, which the ingenuity of man has failed to imitate. They gather the pollen and deposit it in the cells. In the working season they die off very rapidly, their age at this time being only about sixty days. Young bees in the fall live in a state of quietude through the winter, but only live a few weeks after commencing to work on the flowers in the spring. This is why we should be careful to have our colonies kept warm and comfortable through the winter, and especially in the early spring, to induce the queen to lay early, thus securing a populous stock of young workers ready for the first honey-flow in the spring. There are from forty to sixty thousand workers, one queen, and a few hundred drones in a good colony of bees.

The drones are the only male bees in the hive. They are large and clumsy, and make a great noise while on the wing. They cannot sting. They perform none of the labor of the hive, but live on the indulgence of the workers, and for this reason the practical bee-keeper should be able to control the drones in each colony. Before the advent of the movable-frame hive this was impossible; but with the improved method of handling bees, we can exclude drones entirely from our yards if we desire.

The hive is a very important feature in apiculture. Without properly constructed hives, it is impossible to secure the best results. In passing over the country the past few days I could but notice the large and expensive barns the thrifty farmer has provided for his stock, to keep them warm and comfortable. What a contrast to the average bee-keeper. He seems to think that a nail-keg or soap-box is good enough for his bees, then sets them off in some fence corner and gives them

no further attention, but allows the weeds to grow around them, and the moths to get into them, and then complains that bees don't pay. How could he expect anything to pay treated in this way?

An apiary properly kept and nicely arranged with good hives, well painted, is as much of an ornament as nicely painted and arranged houses and barns, and deserves a better place than an out-of-the-way corner. They should have a good, warm, double-walled hive, which is necessary either in summer or winter, and they *deserve* as much care as other stock. They do not require one-fourth as much, but what they do require they richly deserve. Hives should be so arranged that we can contract the brood-nest and enlarge it at pleasure.

By giving bees too much room in the brood-nest, they soon build more comb than the queen can fill with eggs, then they will build drone-cells intending to provide stores for winter use; but when the queen has filled the worker-cells with eggs, they will commence to lay in the drone-cells, and and then instead of workers, we shall rear a lot of drones, to eat what the workers provide. The bees seem to tolerate an over-production of drones in the honey season, but as soon as the harvest is over, they are driven from their homes, and perish by cold and hunger.

For producing extracted honey more room may be given in the brood-chamber, as we can shave off the heads of the drone-brood when uncapping the cells for the extractor; but for comb honey four or five frames is ample. We can place wide frames filled with sections at the sides of the brood-nest with a queen-excluding honey-board between. By thus contracting the brood-nest, we force the bees to commence work sooner in the sections than they would do if they had all the room they wanted below.

Reversing the frames is of much importance in the culture of bees for profit; it pays to have frames that will reverse if only for one inversion, for thereby we can secure our frames built solidly full of comb from top to bottom, making them much stronger, and giving them a third more room in each frame. We can control swarming to a great extent, as we completely upset all their arrangements for swarming, and they at once commence to take the honey now at the bottom of the frame up into the sections, thus securing more surplus honey, and leaving nice, clean empty cells at the bottom that the queen will at once occupy and fill with eggs; and having plenty of room to deposit eggs, and the workers all the work they can do filling out the empty space at the top of the frames with comb, they will nine times out of ten forget all about swarming, for the time being. The queen-excluding honey-board is an important invention, and very necessary in reversing frames.

To winter our bees successfully on the summer stands, requires care and attention at the proper time. As soon as the honey harvest is over I remove all the sections and surplus cases, and examine the brood-nest; if they have not five brood-frames well filled with honey and brood, I at once feed them sugar syrup made of two parts of granulated sugar to one part of water. I would prefer five well-filled frames for an average swarm to winter on, to a large number.

When I am sure that they have a sufficient amount of winter stores, I provide them a passage way through each frame by making a small hole through each comb near the centre, or by placing a Hill's device or a small wooden butter dish over the frames, so that the bees can pass from one frame to another over the top-bars, then I cover all with a woolen quilt, or pieces of burlap, and pack around the sides and over the top with 3 or 4 inches of chaff. After being thus prepared they should not be disturbed until settled warm weather has come in the spring to stay; when they should be united with some weak colony having a queen, or another queen procured for them at once.

Prof. Cook says that, "the study of rural pursuits helps to make home pleasant, and binds together the family, and finally it may be made a source of profit. I may be mistaken; but I thoroughly believe in bee-keeping on the farm."

New Castle, Pa.

REVERSING.

Experimenting with Circassian Bees and Reversible Frames.

Written for the American Bee Journal

BY JAMES W. TEFFT.

Early in April I received 2 colonies of Circassian bees, in Gallup hives, each having 8 frames 12x12 inches. They were purchased for experiment. I had heard that these bees were of no earthly use, as it was impossible to keep them together in large, strong colonies; they would swarm, and swarm, which broke up the working force into small "squibs;" they would build queen-cells by the quart, and yet they were hardy bees, very gentle, not stingers, and would gather honey after swarming equal to other races of bees, all of which I found to be true; for it is impossible to manage them with any degree of success with hanging or suspended frames.

Swarm they would, in spite of all that could be done. They were returned to their hives three times each, cut out a quart or more of queen-cells the queens' wings being clipped, which made it easy to get them. When I returned the last swarm, and while closing up the hive, a swarm came out. They did not stop a minute, but away they went for the woods a mile off. I opened the hive, and almost the first bee that I saw was the old queen. Why did those bees depart from nature's laws?

Alsike clover was in full bloom, yet these Circassian bees would build no comb, neither would they go into the sections. Their reputation was well established, as being of no value. I was disgusted with them, and also with the suspended frame. At that time I would have given them to any one—my patience was exhausted.

But about June 1 I transferred their combs to good reversible frames. On placing the combs in the hive, the honey part was all down (reversed), and the brood up at the top-bar. The sections were put on, and the hives closed.

The next morning the bees were in the sections. Three days after, they had taken all the honey from the brood-frames, and the queens were busy. The sixth day I found any quantity of queen-cells just started in both hives, and they had considerable honey in the sections. I then reversed the frames that had the queen-cells (but not those that had hatching bees), which operation was departing from nature's laws, and the old theory practices of ages.

The next day not a sign of a queen-cell could be found. The side-storing sections were then put on, and from that time to the close of the season the brood-frames were reversed every sixth day. I seldom reverse combs with hatching bees—only at such times that the queen is again laying in them—and I have no more swarming. By July 1 I had in each of the hives a working force of at least 120,000 bees when they were divided.

I have come to the conclusion that nature's laws, with bees, has nothing to do with their swarming, as I understand it. Nature's laws are to build comb, gather honey, nurse baby bees, hatch and feed the brood, clean house, and guard the hive. Nature's law as regards the queen is the one which I try to study and manage. It makes a great difference to reverse the frames at the proper time. The advantages are four to one in favor of reversing,

and it is not problematical, but real, and not a particle of theory about it.

As soon as there are frames that really need reversing, the bees will at once empty the combs of all unsealed honey and convey it to the sections, thus giving the queen more room. At the second reversing, uncap all the honey in the brood-frames; that also will be conveyed to the sections.

I know there are many who have condemned reversible comb-frames, because, I think, they do not understand how to use them. Could they have seen my brood-combs after the third reversal, with no honey in them, (there were 8 frames of brood in each hive, but the 16 frames of comb built full from end to end, and from top to bottom—one solid mass of brood), they would have seen that there was no falsity about it. They would have "reversed" their opinion, the same as several old bee-keepers have done, who have examined my bees. They were amazed, astonished, and delighted!

By reversing the brood-frames, my bees put the honey where I want it. I get the brood-frames full of brood without being obliged to cut combs 7-16 of an inch thick; the bees do the cutting of comb better than I could possibly do it. I do not have to space the frames just bee-space apart. All of my frames are 1½ inches wide, and space themselves.

In practice I find that it is an advantage, as well as natural and economical, to be able to control the bees so as to have them put the honey where I can sell it. The time it takes is a small item for the bees.

If the brood-combs contain any unsealed honey, reverse them late in the day, and the next morning you will find that honey in the sections, and the queen in possession of the empty cells. It seems to give new life, and more energy to the whole colony. The brood-nest is in better shape, the colony is stronger in bees, and there are more field-workers, which means more honey! It gets them in splendid condition to withstand any inclement weather, and just so long as there is sufficient room all around the brood-nest (except at the bottom), the bees will not crowd the queen by clogging the brood-combs with honey. I rarely reverse the outside comb that contains honey, as that comb is reversed for winter use. Neither do I reverse those combs with hatching bees, but only those combs that contain freshly laid eggs, or those with queen-cells, to prevent swarming.

Had I left the Circassian bees on suspended frames, in accordance to nature's laws, as a native writer expresses it, I should or would have destroyed them as being of no value. To test them, I gave them extra work to do, and they performed it splendidly; it was just fun for them to re-convey the honey into the sections.

I care nothing for the natural laws of the *bees*, so long as I give them just room enough for them to store the honey. I do care to study the natural laws of my queens, and see that they have proper accommodations to display natural laws. She is the one I look after, not the bees—the bees will always do their duty, but the queen will not always do hers.

When you neglect to reverse the brood-combs, swarming is the result. To have the field workers broken up in small squads is bad, for from them you can get nothing but small returns. I want from 100,000 to 150,000 field workers in each hive at the height of the honey-flow.

The reversible frame is too good a thing for me to abandon, no matter what others may say against it. They have come to stay in my apiary. If they are objectionable to others, it is simply owing to their letting prejudice run away with their good judgment. Why, I have departed from the ancient practice of nature's laws in manipulating bees! Prof. Drummond remarks thus:

"The laws of nature are simply statements of the orderly conditions of things in nature—what is found in nature, by a sufficient number of competent observers. What these laws are in themselves, is not agreed. That they have any absolute existence, even, is far from certain. They are relative to man in his many limitations, and represent for him the constant expression of what he may always expect to see in the world around him. But that they have any casual connection with things around him is not conceived. The natural laws originate nothing, sustain nothing. They are merely responsible for uniformity in sustaining what has been originated, and what is being sustained. There are modes of operation, therefore, not operators; processes, not powers."

For one thing, we do not demand of nature, directly, to prove bee-keeping. That was never its function. Its function is to interpret, and this, after all, is possibly the most faithful proof. The best proof of a thing is that we see it. If we do not see it, perhaps proof will not convince us of it.

The Circassian bees on suspended or hanging frames are worthless; on reversible combs, with proper management, they are wonderfully successful. Had I transferred them the first thing, I know they would have outstripped any other bees in my yard; as it was, they did not show what they could do until the drought began—from July 6 to Aug. 10. The Italian bees lost, and could not make a living; the Circassians gained, both in brood and honey, clear up to the close of the season on Nov. 2.

In recapitulation, I must say that I now like the Circassian bees. The reversible frame-combs is what did it. The bees prove to be very hardy, great workers, being out in rain or sunshine, when other bees are quiet. They are out in the morning very early, fly later at night, and gather honey when other bees do not. The queens are very prolific. They are the most gentle bees to handle without smoke. Smoke will make them as mean as can be, and if abused they will sting fearfully.

They build straight combs, and not thick ones. I see no honey-bulged combs, but all being so even and clean looking. I worked the two old queens all summer on 8 frames each, and there was not one pound of honey in the whole lot, but the comb was completely filled with brood. I think they are magnificent bees, and a very valuable race for crossing with other races.

The one and only objectionable feature that I see to the Circassian bee, is the tendency to build brace-combs. They draw out the comb from the sections, and attach it to the separators, which, when taking off the sections, deface the most beautiful cappings that I ever have seen. I am now sorry that I did not test them without separators; but this season I expect to give them a fair trial.

Their propensity to swarm is not desirable, as they cast such small swarms; but by reversing the combs as needed, and at the proper time, will break up their desire to swarm.

Collamer, N. Y.

INCREASE.

The Prevention of Increase by the Removal of Queens.

Written for the American Apiculturist

BY P. H. ELWOOD.

He who allows his bees to increase by natural swarming at their own good pleasure, may be called a bee-keeper; but it is only he who has learned to control increase, making it much, or little, or none at all, as circumstances may direct, that has earned the title of bee-master.

It is often well to know how to run a yard of bees without making any increase. When the bee-keeper has already more colonies than he can manage, it would seem foolish to make more, unless he has a good market for

bees. Quite often, when his locality is already overstocked, he finds it is his neighbors only who wish to buy, and at a price that barely repays him for foundation and hives.

Sometimes a person could profitably keep one yard in connection with some other business, if he knew how to manage them without increase, and with the least expenditure of time and work; the time and work to be chiefly given when the bee-keeper can best spare it, and not at the call of the bees. This method of running one yard with some other occupation, and the minimum amount of work and expense, may be the practice of the future, one strong argument against bee-keeping as a specialty being the uncertain value of the business when carried to a forced sale by the death of the bee-keeper, and the consequent uncertain provision for the apiarist's family.

Then another very large class are now producing honey at a greater cost than the selling price, and it would be unwise to enlarge a business already conducted at a loss. And it is always better to have the control of increase like everything else, well in hand and under well-laid plans, then a sufficient number of hives and supplies can be secured with some reasonable expectation of having them all used, and yet have enough in those years in which bees, when left to themselves, often swarm to death.

When running bees for extracted honey, it is comparatively easy to control swarming; for by giving them a large amount of room for both brood and honey, and extracting the old honey, and afterward the new just before the main flow commences (as ought to be done in any case, as it is of inferior quality) there will usually be no attempt to swarm; with reasonable attention to extracting afterward. This method is simple, and it would be well if beginners would stick to the extractor until they are successful with comb honey management.

When comb honey is produced it is much more difficult to control increase. It is easy in a swarming year to rear a crop of swarms, but not so easy to produce a crop of comb honey. The well-filled brood-nest so necessary to the successful production of comb honey is also very favorable to the forcing out of swarms.

A large hive well shaded and ventilated, with plenty of room in both brood and surplus apartments, will retard and sometimes prevent the issue of swarms, but there is no certainty about it, and it is better to have swarms issue earlier than in the middle of the honey harvest, as is apt to be the case with large hives.

Cutting out queen-cells, the withdrawal of brood, and the management of the brood-chamber as recommended by Mr. Simmins, will also delay but not prevent swarming, while there is danger of throwing the colony into a condition known as having the "swarming fever." In this state work to a large degree will be suspended, and the bees show by unmistable signs that they are dissatisfied. Many bees will desert their own hives and enter others, which seems to disaffect these also. The bee-keeper will be similarly affected when in the midst of a honey flow he comes to look into the surplus receptacles, or to notice the number of idle bees hanging about the hives. It is only strong colonies that produce comb honey satisfactorily, and no system of management will be successful unless the colonies are built up strong before the harvest. This is particularly true of the method I am about to describe.

I recommend the clipping of the queens' wings, believing it to be the best. There is then no loss of unexpected swarms, and no swarms to be hived from inaccessible places. In every apiary there are some colonies (in some seasons a majority) that will work right along without any attempt to swarm. When no increase is desired, there is no need of molesting them, as they usually produce their full share of comb honey. All other colonies, as they complete their preparations for swarming, should have their queens removed with one or more sheets of brood, and enough workers to protect it, and be placed in another hive or small receptacle provided for her. All queen-cells old enough to hatch within nine days should be removed from the old colony, and the remaining brood-combs pushed together, contracting the brood-nest that much.

On the eighth or ninth day after, all cells should be broken from the now queenless hive, leaving them hopelessly queenless. In a week or ten days longer, the old queen may be smoked back into the old hive. The success of this will depend somewhat upon the race of bees kept. When I had black bees there was seldom a failure, but as my bees became Italianized, the losses were greater.

Mr. Crane, one of the best bee-keepers in the country, takes this time to re-queen the most of his colonies by giving them a virgin queen, which is usually well received. If the queen is to be changed, the old queen can be killed at the time of her removal, and the brood-nest not contracted. The brood removed may also be returned to the old hive, or it may be used for nuclei, or put into extracting colonies, or used in a variety of ways that may suggest themselves to the average bee-keeper.

No colony should be left queenless longer than 21 days, as after the brood has all hatched, there may be no empty cells for storing pollen except in the sections. If the queen-cells are broken out at the end of seven days after the removal of the queen, there will often be another brood of queens reared from the brood remaining. I have never known such queens to lay anything except drone-eggs; but they are capable of leading off swarms, or of establishing a monarchy in the old hive that is hard to overthrow. Before I learned that the books were not right as to the time for breaking out cells to make a colony hopelessly queenless, I had many such cases, and this is the only kind of "fertile worker" I have ever been troubled with.

This system of non-swarming works well with me, and undoubtedly will do the same in localities having a similar honey-flow. In other sections, modifications of the plan may be adopted to meet the varying circumstances. With sectional hives like the Heddon, a whole half of the brood-chamber might be taken with the queen and returned with the queen at the proper time, which, with me, is usually near the close of the white honey harvest. Or the sections might be changed, leaving the queen out longer than the 21 days.

It is said that queenless colonies do not work so well, but I by this method get extra strong colonies, and as much honey as by other methods, with less work and expense.

This method of non-swarming is not recommended after a short trial, for it has been worked for several years with thousands of swarms in different bee-keepers' hands, and tons of honey produced. In answer to the objection, that honey produced by queenless colonies is not as choice as that produced otherwise, I will say, that honey so produced took the highest prize at the Centennial in 1876, and later at the Paris Exposition, after having been carried across the ocean and exhibited in the original packages.

In the fall I have not found the brood-chambers of such hives any heavier on the average than others, neither have I or other bee-keepers discovered that such colonies failed in winter because of too much bee-bread. With reasonable attention we are sure of having no swarms issue, and I know of no other way by which we can uniformly reach the same result.

Starkville, N. Y.

Your Full Address, plainly written, is very essential in order to avoid mistakes.

AMERICAN BEE JOURNAL
ESTABLISHED IN 1861 — OLDEST BEE PAPER IN AMERICA

ALFRED H. NEWMAN,
BUSINESS MANAGER.

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and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Magazine	1 50	1 40
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	1 50	1 40
The Apiculturist	1 75	1 60
Canadian Bee Journal	2 00	1 80
Canadian Honey Producer	1 40	1 30
The 8 above-named papers	5 65	5 00
and Cook's Manual	2 25	2 00
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 75	1 50
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Iowa Homestead	2 00	1 90
How to Propagate Fruit	1 50	1 25
History of National Society	1 50	1 25

Cork for Winter Packing.—Its advantages are that it never becomes *musty*, and it is *odorless*. Cushions can be made of cloth and filled with the cork, for winter packing. We can supply all orders now at 10 cents per pound. Or a seamless sack of it, containing 15 pounds, for $1.00.

Red Labels for Pails.—We have three sizes of these Labels ranging in size for pails to hold from one to ten pounds of honey. Price, $1 for a hundred, with the name and address of the bee-keeper printed on them. Smaller quantities at one cent each; but we cannot print the name and address on less than 100. Larger quantities according to size, as follows:

	Size A.	Size B.	Size C.
250 Labels	$1.50	$2.00	$2.25
500 Labels	2.00	3.00	3.50
1,000 Labels	3.00	4.00	5.00

☞ Samples mailed free, upon application.

A Modern BEE-FARM, and its Economic Management; showing how bees may be cultivated as a means of livelihood; as a health-giving pursuit; and as a source of recreation to the busy man. By S. Simmins. For sale at this office. Price, $1.

We Supply Chapman Honey-Plant **SEED** at the following prices: One ounce, 40 cents; 4 ounces, $1; ¼ pound, $1.75; 1 pound, $3. One pound of seed is sufficient for half an acre, if properly thinned out and re-set.

Alfalfa Clover.—For habits and cultivation of this honey-plant, see page 245. We supply the seed at the following prices:—Per lb., 22c.; per peck, $3.00; per half-bushel, $5.50; per bushel of 60 lb., $10.00. If wanted by mail, add 18 cents per pound for bag and postage.

Honey and Beeswax Market.

NEW YORK.

HONEY.—We quote: Fancy white in 1-lb. sections, 13@15c.; the same in 2-lbs., 10@11c.; buckwheat 1-lbs., 10c.; 2-lbs., 9c. Market dull. We are doing all we can to reduce stock, to make room for the new crop.
BEESWAX.—28c.
HILDRETH BROS.,
May 21. 28 & 30 W. Broadway, near Duane St.

SAN FRANCISCO.

HONEY.—We quote: White to extra white comb, 12½@15c.; amber, 8@11c. Extracted, white to extra white, 5½@6c.; amber, 4½@5c. Arrivals of the new crop are small, the estimates being an average crop.
BEESWAX.—20@24c.
June 18. O. B. SMITH & CO., 423 Front St.

DETROIT.

HONEY.—Best white in 1-lb. sections, 14c.—Dull.
BEESWAX.—23@24c.
June 14. M. H. HUNT, Bell Branch, Mich.

CHICAGO.

HONEY.—Prices range from 15@16c. for best one-lb. sections; other grades are slow, at lower prices. Extracted, 7@8c. Light demand, and supply larger than usual at this season of the year.
BEESWAX.—23c.
May 1. R. A. BURNETT, 161 South Water St.

NEW YORK.

HONEY.—We quote: Fancy white 1-lb. sections, 12c.; fancy 2-lbs., 10@11c.; fair white 1-lbs., 10@11c., and fair 2-lbs., 8@9c. Buckwheat 1-lbs., 7@8c. The demand is dull for comb but fair for extracted, of which new from the South is arriving, and sells for 55@65c. per gallon.
BEESWAX—Dull at 23½@24c.
Jun. 15. F. G. STROHMEYER & CO., 122 Water St.

CHICAGO.

HONEY.—We quote: Fancy white clover 1-lbs., 16@17c.; 2-lbs., 15@16c. Dark is slow sale at almost any price. Extracted is scarce, and sells at 7@10c.
BEESWAX.—23c.
Mar. 13. S. T. FISH & CO., 189 S. Water St.

CINCINNATI.

HONEY.—We quote extracted at 5@8c. per lb., for which demand is good. Comb honey, 12@15c.—Demand slow.
BEESWAX.—Demand is good—20@22c. per lb. for good to choice yellow, on arrival.
Jun. 14. C. F. MUTH & SON, Freeman & Central Av.

MILWAUKEE.

HONEY.—Choice white one-lb. sections, 16@17c.; 2-lbs., 15@16c.; 3-lbs., 14c. Extracted, white in kegs and ½-barrels, 8 to 8½c.; in tin and pails, 9½@10c.; dark in barrels and kegs, 5@7c. Market fair.
BEESWAX.—22@25c.
Apr. 23. A. V. BISHOP, 142 W. Water St.

DENVER.

HONEY.—Best white 1-lb. sections, 17@19c.; 2-lb. sections, 15@17c. Extracted, 7@10c.
BEESWAX.—20@23c.
Mar. 1. J. M. CLARK & CO., 1409 Fifteenth St.

KANSAS CITY.

HONEY.—We quote: Choice white 2-lb. sections, 17@18c.; dark 2-lbs., 14@15c.; choice white 1-lbs., 18 to 20 cts.; dark 1-lbs., 15@16c. White extracted, 7@8c.; dark, 5@6c. Demand is slow. White extracted is firm when in 60-lb. tin cans.
BEESWAX.—21 to 22c.
Mar. 29. HAMBLIN & BEARSS, 514 Walnut St.

BOSTON

HONEY.—We quote: 1-lb. sections, 16@17c.; 2-lb. sections, 14@16c. Extracted, 8@9c. The market is not very brisk and sales are slow.
BEESWAX.—25 cts. per lb.
Mar. 24. BLAKE & RIPLEY, 57 Chatham Street.

SAN FRANCISCO.

HONEY.—We quote for new extracted 6@4½c., as to color and quality. New comb honey 14@10c., as to quality. Arrivals are still small, and demand of a jobbing nature.
BEESWAX.—Scarce, 20@24c.
June 2. SCHACHT & LEMCKE, 122-124 Davis St.

KANSAS CITY.

HONEY.—We quote: White 1-lbs., unglassed, 15c.; 1-lb., white, glassed, 14c.; dark, 1-lb., 2c. less. California, 2-lbs., comb, white, 13c. Extracted, 7c. Considerable old honey is in this market. No new yet in. Sales are very slow.
BEESWAX.—None on the market.
June 9. CLEMONS, CLOON & CO., cor 4th & Walnut.

Paper Boxes—to hold a section of honey for retail dealers. We have two sizes on hand to carry sections 4¼x4¼ and 5¼x5¼. Price, $1.00 per 100, or $8.50 per 1,000.

Advertisements.

FOR SALE—600 Colonies in the movable-comb hives, at $4.00 for Italians, and $3.00 for Hybrids.
25A13t **G. H. ADAMS**, Troy, N. Y.
Mention the American Bee Journal.

ITALIAN QUEENS—Untested, 75c. each; 6 for $4.00; 12 for $7.50. Address,
26Atf John Nebel & Son, High Hill, Mo.
Mention the American Bee Journal.

ITALIAN Bees for Sale.—1 Queen reared by natural swarming, $1.25; 3 ditto, $3.00; 2-frame Nucleus with any Queen, $2.00 extra.
W. H. SHANER,
26A1t LEECHBURG, Armstrong Co., PA.
Mention the American Bee Journal.

Italian Queens by Return Mail.

I **CAN** now send QUEENS by return mail.—Select Tested, $2.00; after July 1st, $1.50. Queens warranted purely mated, $1.00; 6 for $5.00. Safe arrival guaranteed.
J. T. WILSON,
26A1t NICHOLASVILLE, Jess. Co., KY.
Mention the American Bee Journal.

SOUTHERN HONEY WANTED!

WE are likely to have good use for a lot of **Southern Honey** in the near future, and invite shipments **now.** Address,
CHAS. F. MUTH & SON,
26A3t Freeman & Cent. Ave., Cincinnati, O.
Mention the American Bee Journal.

Wood's Italian Queens

ARE now ready to ship. Every one is warranted, and all that are not equal to any in the country are replaced by Extra Tested Ones of 1888 rearing; **98 per cent.** of all Queens sold last season proved purely mated, and, as far as I know, every customer is satisfied. **Warranted Queens,** 75 cents each; 6 for $4.25; 12 for $8.00. Address,
JAMES F. WOOD,
26Atf NORTH PRESCOTT, MASS.
Mention the American Bee Journal.

VICTOR

SAFE.

DESIGNED for the Farmer, Lawyer, Doctor, Postmaster, Merchant, Township and County Officer, the Bee-Keeper, the **Home**—in fact **every one** should have a secure place for valuables.

We offer in the **VICTOR SAFE** a **first-class** Fire-proof, Burglar-proof, Combination Lock Safe, handsomely finished. Round corners, hand decorated; burnished portions are nickel-plated. Interiors nicely fitted with sub-treasuries, book-spaces and pigeon-holes.

Prices range as follows:

	OUTSIDE.	INSIDE.	WEIGHT.	PRICE
No. 2.	22x15x16,	12x8x8½,	250 lbs.	$30 00
No. 3.	28x18x18,	15x10x10,	600 "	40 00
No. 4.	32x22x22,	19x14x12½	800 "	60 00

THOS. G. NEWMAN & SON,
923 & 925 W. Madison-St.,.... CHICAGO, ILLS.
Mention the American Bee Journal.

CARNIOLAN

Gentlest bees known; not surpassed as workers even by the wicked races.
Imported Queens, "A" grade, $8.00, Tested, $4.00; Untested, $1.00,

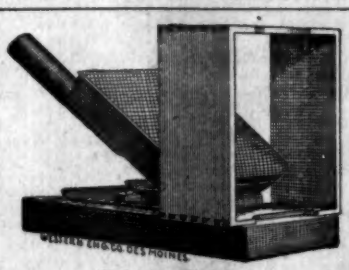
QUEENS.

One-half dozen $5 00
Never saw foul brood. Cash always required before filling an order.
S. W. MORRISON, M. D.,
14Etf Oxford, Chester Co., Pa.

SMITH & SMITH

We have one of the largest
Bee-Hive Factories in the World.

☞ If you are interested in BEES, send for our Price-List—*Free.* Good Goods, and fair Prices. Address, **SMITH & SMITH,**
10Etf KENTON, Hardin Co., O.
Mention the American Bee Journal.



(Patent applied for).

BEST FOUNDATION FASTENER for Brood-Frames and Sections. Description and Illustration sent free on application.
J. W. BITTENBENDER,
20Etf KNOXVILLE, Marion Co., IOWA.
Mention the American Bee Journal.

TESTED ITALIAN QUEENS, $1 each: Untested, 75 cents each; 3 for $2; 12 or more, 65 cents each. **75 cents** per pound for **Bees. Albino Queens** same price.
26A1t **I. R. GOOD, Nappanee, Ind.**
Mention the American Bee Journal.

SAMPLE COPIES of the **AMERICAN APICULTURIST** and our Price-List of
Winter Strain of Pure Italian Bees
sent free. Address,
18Etf **APICULTURIST, Wenham, Mass.**
Mention the American Bee Journal.

BEE-SUPPLIES, RETAIL AND Wholesale.

The Largest Steam-Power Shops in the West; exclusively used to make **Everything** needed in the Apiary, of practical construction and at **Lowest Prices. Italian** Bees, Queens, 12 styles of Bee-Hives, Sections, Honey-Extractors, Bee-Smokers, Bee-Feeders, Comb Foundation, and everything used by Bee-Keepers always on hand. My Illustrated Catalogue FREE. **E. Kretchmer,**
16Etf **Coburg, Iowa.**
Mention the American Bee Journal.

Eaton's Improved
SECTION-CASE.
BEES & QUEENS. Send for free catalogue. Address
FRANK A. EATON,
7Etf BLUFFTON, OHIO.
Mention the American Bee Journal.

ITALIAN BEES and QUEENS.

ONE Untested Queen, $1.00; 3 for $2.00. BEES by the Pound and Nucleus. Send for Price-List.
Address, **H. G. FRAME,**
9E13t **North Manchester, Ind.**
Mention the American Bee Journal.

HOW TO RAISE COMB HONEY,

PAMPHLET full of new and improved methods; Price, 5 one-cent stamps. You need also my list of Italian **Queens, Bees** by the **lb.,** and Supplies. OLIVER FOSTER,
13Atf Mt. Vernon, Linn Co., Iowa.
Mention the American Bee Journal.

GLASS PAILS

FOR HONEY.

THESE Pails are made of the best quality of clear flint glass, with a bail and a metal top and cover. When filled with honey, the attractive appearance of these pails cannot be equaled by any other style of package. They can be used for household purposes by consumers, after the honey is removed, or they can be returned to and re-filled by the apiarist.

Prices are as follows:

To hold 1 pound of honey, per dozen, ... **$1.60**
" 2 pounds " " **2.00**
" 3 " " **2.50**

THOS. G. NEWMAN & SON,
923 & 925 W. Madison-St.,.... CHICAGO, ILLS.

LOOK HERE!

FOR Sale Cheap—Bee-Hives, Shipping-Crates and Brood-Frames; Comb Foundation, Planer-Sawed V-Grooved Sections a specialty. Price-List free. J. M. KINZIE & CO.,
13Atf Rochester, Oakland Co., Mich.

WE will SELL CARNIOLAN QUEENS, reared in June, July and August, 1888, until further notice. Untested queens $1.00; tested, $2.00; tested and selected, $3.00.
ANDREWS & LOCKHART,
24Atf PATTEN'S MILLS, Wash. Co., N. Y.

NEW ONE-POUND HONEY PAIL.

THIS new size of our Tapering Honey Pails is of uniform design with the other sizes, having the top edge turned over, and has a bail or handle,—making it very convenient to carry. It is well-made and, when filled with honey, makes a novel and attractive small package, that can be sold for 20 cents or less. Many consumers will buy it in order to give the children a handsome toy pail. **Price, 75 cents per dozen, or $5.00 per 100.**

THOS. G. NEWMAN & SON,
923 & 925 W. Madison-St.,.... CHICAGO, ILLS.

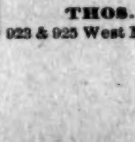
10 per cent. OFF

ON SECTIONS, from prices given in price-list. We make **four grades** of **COMB FOUNDATION—Heavy Brood, Light Brood, Thin & Extra Thin** for Sections.
☞ Send for free Price-List and Samples.—**Dealers,** write for special prices.
Address, **M. H. HUNT,**
Bell Branch, Wayne Co., Mich. (near Detroit).
Mention the American Bee Journal.
2Etf

2-Story Langstroth Hive, 80c.

WE still have a few of those Two-Story **Langstroth HIVES** with 10 Brood-Frames, at **80 cents.**

Who wants them? Speak QUICK, or it will be too late. Address,
SMITH & SMITH,
10Etf KENTON, Hardin Co., OHIO.
Mention the American Bee Journal.



We have some **ELEGANT RIBBON BADGES,** having a rosette and gold Bee, for bee-keepers' use at Fairs, Conventions, etc. Price 50 cents each, by mail, postpaid.
THOS. G. NEWMAN & SON,
923 & 925 West Madison-Street, - CHICAGO, ILLS